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Editorial Panel

I just wanted to tell you what I think of your columns in *The Computer Page*. The intelligent and thoughtful comments you have to offer is very stimulating to this day and age, like typical in the computer magazine where everyone is going for one up and every new technology.

As well, I like your gentle reminder that computer isn't the only part of life. Thank you for not being the typical, pompous head and having a personal outlook on the new technology.

Dave Mac, Calgary via Internet

Referring to an e-computer journalist with some perspective on the reality of computer technology.

(Mr.) via Internet

DE Replies: *Gracious thanks for your positive comments. I am many of these thoughts to a wife and kids who keep dragging me screaming into the real world.*

DE's Human Mirror Dies

Gracious thanks to everyone for Jack Thompson's comments (DEP October '94) on how I felt at that Windows 95 (MS-DOS) Chicago is a big step compared to its predecessor.

We would also be making a beautiful statement if the world is gets dark at night and light during the day that it is old news.

Unfortunately, the gloves over the fact that when Windows 95 is released in June 1995 (or later) it will offer much the same functionality as MS-DOS 6.0 did in Spring 1993.

That has to offend.

If I may extend his rationale that products that are "progressive enough" merit further coverage (TGP September '94), Windows 95 is nothing to cheer about. There is nothing new here. MS-DOS 6.0 already does what Windows 95 will do almost a year from now (if we are to believe the Microsoft marketing machine). The upcoming release of OS/2 3.0 will push the envelope even further.

What Windows 95 will do next year is old news.

The fact that Microsoft is so far behind in desktop-class development is sadly noteworthy.

John Canby, Tems OS/2 via Internet

DE Replies: I don't think we've ever quantified the many technical merits of OS/2 before that has raised the floor in previous versions of OS/2, including its advanced multi-tasking and multi-media, and instead of that anyone who looked at OS/2 objectively would say that its installation was as simple as the installation process for Windows 3.1, for example.

If OS/2 is being supplied for the masses, then installation has to be a no-brainer — not because average computer users don't have better, but because they choose to use computers for the same old file word processing or data manipulation and not for the challenge of solving big puzzles.

Judging by what IBM has done with OS/2 Warp 3.1 — which we are coming to our mind more frequently — IBM has realized that it has to address marketing and usability issues as much as technical ones.

There is an edge in the software industry that says version 3 is the next one — the one that finally makes it commercially viable.

Now what IBM has revealed about Warp, the version 3.1 may, indeed be there.

A Classical Argument

I would like to take this opportunity to respond to points made by Dave MacDonald in his article "Microsoft Updates Classical Music" (DEP Oct '94). First let's

MacDonald state that Microsoft is "the undisputed leader in the classical music of computer graphics." That's not to believe that MS was the first in the industry of putting classical music appreciation on CD-ROM. In fact, Voyager Company, put out at least ten of these titles for the Mac.



What's the



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Mailbox

before Microsoft even had the idea. And the two ladies, forming the Microsoft "Duo-duo": Terry Squawka and Berendine a 9th Symphony were taken by Microsoft and converted into two of their very first "real music" CD-ROM offerings.

Then, I find the statement that The Box of Spring (written in 1918) by Steinbock is

a "confused confusion" of the Christian world," not accepted until "last Thursday" unless this. Count on this. The first of being a very well accepted and accepted an extremely important piece of evidence and music. It is performed regularly and in further literature its acceptance is but here indicated and pointed to great length.

Significantly, who would disagree in the time between the first audience did question in too obscure, based, however, various vulgar, etc.) must have been brought up on a list of final, possibly, concerning, according to the text.

Let by Mr. Mac Donald's complaint that with the exception of Berendine's

music and sometimes offered are "obscure" or "relatively unpopular" is backwards. All of these composers and pieces are very well known—especially Schubert and his "E-flat" Quintet. This piece is one of the very best pieces that many come to know of John Box. It was directly then in fact through its connection with his well known list, "The Boxists" (The Boxists CD counts the knowledge not that of direct pieces and their pieces depends on into a musical box is ground).

Barrie Hartington, London, BC

Did Reynolds: One of the reasons there is so much opposition in the world today is that people often use against arguments that are actually well presented. "Under" for example, as "one who is followed" in this case, we're looking at how often all created with the highest production values. "First" simply means first.

Steven: I previously stated The Box of Spring is the first known I even have a couple of recordings of it. But survey your friends do not have many have seen one and you'll get my point. Modern dance composers are important place in history are. It is performed regularly and is presented to great length. But I wouldn't say it's a very well accepted, just want the wall over. And the next time you're at the symphony, try and tell people to turn the first floor down from Schubert's "First Quintet."

What you missed was my point that CD-ROM is still in its infancy and I was surprised Microsoft went such experimental ventures over the more obvious. I don't think many would talk of learning more about "Little Brown Bookends" or make "Adele" or other packages, though I don't you might regard them as "blind, profoundly understanding and more dramatic" just because they're old. See what the symphony.

Sightings: Steven M. Johnson



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newsbytes

North America

IBM announces System 3080 release — IBM is making a final splash on the big time computer market with a new product: the System 3080. It is a line that may indicate the growing importance of the home market for the System 3080. IBM's new System 3080 is a 3080 series of PCs aimed at the business market.

Compaq's new Trinitron — Compaq Computer Corporation has introduced a new set of portable computers with Trinitron technology.

Bell Canada introduces Trinitron — Bell Canada (the largest in Canada's regional telephone companies) has announced a new long-distance network to replace the current existing plans.

Intel's new 80386 — Intel Corporation of Canada has announced a new series of microprocessors to go after the microprocessor market. The new series is a new family of 80386 microprocessors. Intel's new 80386 is a new family of 80386 microprocessors.

Microsoft's new Windows — Microsoft Corp. has announced a graphical tool for building and managing Internet web sites. The tool is called Windows. The new version of Windows is a new family of 80386 microprocessors.

IBM's new System 3080 — IBM's new System 3080 is a new family of 80386 microprocessors. The new series is a new family of 80386 microprocessors. IBM's new System 3080 is a new family of 80386 microprocessors.

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A New Look For Apple



Mac OS

Apple Computer Inc. has announced a new look for the company's new look. The new look is a new look for the company's new look. The new look is a new look for the company's new look. The new look is a new look for the company's new look.

Starting with the next release of Apple's Macintosh operating system (OS) will be the new look for the company's new look. The new look is a new look for the company's new look. The new look is a new look for the company's new look.

to most important new product: the new System 3080. It is a line that may indicate the growing importance of the home market for the System 3080.

IBM's new System 3080 — IBM's new System 3080 is a new family of 80386 microprocessors. The new series is a new family of 80386 microprocessors. IBM's new System 3080 is a new family of 80386 microprocessors.

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NEW RELEASE

OS/2 Warp Hits Its Stride

BY GEOFF WHEELWRIGHT

If you believe in symbolism, then the events surrounding a recent press briefing about OS/2 Warp Version 3 have to look well for IBM. On the way to an international press preview event at IBM's Personal Software Product division in Austin, Texas, more than half a dozen of the attendees were seriously delayed by an unexpected problem at the airport of a certain major US city, where the air traffic control system broke down. The name of that town: Chicago.



A busy PC user will learn by now that what happens in New York happens in New York. Microsoft's only name for the next version of Windows? Windows 95. This line of thought of IBM's plan to attack the market of 2002. What has been said is still a planned copy, that "Warp 4.0 as Chicago has been delayed" and adding people instead to "take off" with OS/2.

Microsoft has now of course announced that Chicago has been postponed "Windows 95" and will make its debut com-

only later than anticipated being promised only "in the first half of 1995". That delay has prompted Wendy Corp. IBM's director of marketing for Personal Software Products to admit that IBM has been unable to make any more of the delay.

IBM OS/2 Warp 4.0 is of course the only one for the making this year and was launched in October with the announcement of a large advertising campaign and lots of hope for IBM that OS/2 will be "just as much" to the information superhighway through



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include computing" materials and, as such, include strong support for games (both DOS and Windows), network file sharing (Intranet and Corporate area) and a good suite of productivity applications.

But the first serious users of OS/2 will notice is that IBM has altered the way it calls a "test button (install)" so that once you have pressed the install button, there are no further questions to answer, things to test or links to press or system changes to make. More of this is done via "polling" of on-board PC hardware so that they can make a "test guess" about a PC's hardware configuration without having to test the user. This test guess can be changed if a user sees something is it they're wrong, but IBM seems to think that this won't happen much.

Once you've hit the install button, then it's just a matter of burning and inserting disks until Wap is installed, giving you an lucky enough to have a CD-ROM and you then won't have any disks to insert. IBM promises that OS/2 itself won't eat up more than 30 MB of hard disk space during the installation.

Workplace Shell Notes

When OS/2 Wap is up and running, you'll quickly realize that you're not in Canvas any longer. The real business OS/2 Workplace Shell has been redesigned to make it cleaner and easier to use, with the most noticeable change being the addition of a LaunchPad. This is similar to the "Start" button in Windows 95 (at least the current beta version of 95), and allows you to

quickly use a single-click of the mouse to launch commonly used applications. The applications are stored in six boxes (by subject matters) while "pull-out" when pressed and those which the applications are launched once you select their appropriate icon.

New menu structures and icons have also been provided for OS/2 Warp Version 3, along with a "Control center" (IBM's version of device control) and information for some of the main. Menus or submenus include a recognition that some users will need to learn the parallel port between printers and CD-ROMs (which parallel-to-serial converters are used) and that flag and they become an added for existing PCs that don't support MP. On the latter point, IBM has designed Wap so that it allows "hot plugging" (insertion of add-on items) while a PC is switched on of PCMCIA cards without the PC having to have a flag and flag BIOS.

OS/2 Business Apps Rivalled

Probably the biggest difference between this version of OS/2 and previous versions from Compaq, is the breadth and depth of the bundled software. With a long list to get across the idea that OS/2 users are getting their "best bet" when they buy Wap and they will be compensated with a new word package of the IBM products and concepts ready in a separate area within the Workplace.

This collection is being loaded in the OS/2 Warp Version 3 Business and IBM lists that if they don't attempt to be included with OS/2 (a few sure to open only sales of the product) The Business includes:

- An OS/2 Computer access package
- An Internet Information Highway productivity kit
- Computing IBM limited support services and desktop for easily browsing pictures and documents. Viewfinder for gathering together information from commonly accessed programs. IBM Universal User for electronic mail access to a number of mail services, POP3 for the transfer. When the remote login to services and POP3 newsletter software
- A copy of IBM's Pattern to Pattern group communications, data exchange and conferencing software
- A set of productivity applications based on IBM Workplace data known as IBM Words that will include word processing, spreadsheet, database, report writing and charting functions
- A personal information manager (PIM) that will also have an addressbook and management capabilities

The company is not shy about what it thinks all this provides for users. "OS/2 Warp Version 3 provides world-class, home office and mobile users with a high performance, low-maintenance version of the premier 32-bit operating system for industry-standard personal computers, setting a new standard for easy operating system," concludes Hilary Clancy. "OS/2 Warp Version 3.0 provides Windows 3.1, Windows 3.11 or Windows for Workgroups 3.11 or Windows for Workgroups 3.11 customers a clear upgrade path to advanced 32-bit functionality now with full support for current DOS, Windows and OS/2 applications as well as superior stability and reliability." □




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OS/2's Window of Opportunity

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Another element in IBM's strategy of selling against Windows 95 will be to emphasize that Chicago will actually have far fewer native 32-bit applications running on it than OS/2 when it is launched. While Windows 3.1 has a user base of some 50 million or more, Clegg says that

he will sell Wap as the information high way on-ship that will run all Windows 16-bit software, include a vast array of new applications and provide users with access to the best value system and stable 32-bit software.



There were a few key selling points made by Wally Clegg, IBM Personal Software Products Division of marketing, in a recent briefing on Wap. Wap will suggest the degree of compatibility that IBM has in the product, as well as provide a fairly realistic picture of just how much of a market "window" has been created for it by recent facts of events.

The last fact of events has been the "overwhelming interest" in the "Information Highway" concept that has resulted in way into all corners of mainstream radio, TV, magazine and newspaper print. It is hard to read a newspaper or serious newspaper (three days without seeing this phrase crop up) or news.

This has given IBM a highly public business to which it can attach OS/2. It is a document that certainly has given more pressure and life to IBM's Microsoft Windows 3.11 which is now just assumed to be the engine on which the rest of the computer industry will run. And given that IBM has accepted that Windows 3.11 compatibility was one of its four cornerstones in the design of Wap, it appears that the company wanted to see that side of a marketing issue very early in the agenda.

That brings us to IBM's second key fact of events: the anticipated huge delay in the arrival of Chicago (now renamed Windows 95). The next version of Microsoft Windows will not only be a complete 32-bit version of Windows, but it will look and feel completely different and will arrive much earlier than the end of 1995 (by which you can gather it might not be available much before June).

Clegg doesn't intend to lose the particular gift horse in the details emphasizing that the time between now and when Windows 95 ships will be "make-or-buy" for Wap.

Just to see that IBM Information Offices (CIOs) at large corporations have had that they would be willing to share to Wap 3.11 if you get the user community excited enough about it. "CIOs are already there with us that if we can make them aware to OS/2 as Windows they will take it from there. In terms of selling users on OS/2," he says. "This is a rare. Microsoft wants to learn how to sell to the enterprise and we need to learn how to get to end-users faster. They want what we've got and we want what they've got. We want guys in corporations to come in

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NEW RELEASE

OS/2 Warp V3 Arrives With Internet Boarding Pass

BY GEOF WHEELWRIGHT

With the release of a completely overhauled OS/2, IBM is launching an all-out, take-no-prisoners assault on the desktop operating systems market.



How to Use the Tutorial Screen Shot

Known simply as OS/2 Warp V3 (and given logo #1 under the code name Warp), IBM's latest operating system arrives with not only 40MB of memory and the solid ready-made to provide for users with immediate access to the Internet global computing network. Included will be the registration and 10 free hours of access to IBM's existing worldwide Advanced network (available to Canada beginning Nov. 1). Upon registration, users will get at least 40 hours of access time per month at a flat rate of approximately \$25 per month via either local phone or 1-800 number access.

IBM says Advanced already has the necessary number of telephone lines established in 11 countries, to handle the expected 10 million users IBM is expecting on signing up in the next 61 months via OS/2 Warp V3 purchase. In fact, this ambitious Internet program plan — which will also include IBM's World Wide Web access on-line use. IBM's Copier client software, a NovellNet utility to quickly use Novell conferences and worldwide Internet e-mail, telnet and HTTP servers in the price of purchase — will be an integral part of selling OS/2.

The new OS/2 will be available in two versions: a desktop desktop network client and a lightweight server version. The new basic version of OS/2 Warp V3, known as OS/2 Warp V3 and OS/2 Warp V3 for Windows, include all these Internet access and utility functions as part of the OS/2 Warp V3 BasePack and will be only \$299.95. The operating system will be sold with the tag line "OS/2 Warp Version 3 is your ambassador to the global community along the information highway."

There will also be an OS/2 Warp V3 Client for systems that will be OS/2 Warp V3 and OS/2 Warp V3 for Windows. These will be joined later by versions that support Remote Mail Processing (RMP) run on the

PowerPC platform and provide "superuser" capability. But the lion's share of the company's marketing effort will initially go into selling the base version of OS/2 Warp V3 as a way to get on the "Information Superhighway."

According to Wally Camp, IBM Personal Software Product director of marketing, IBM is keenly aware of the momentum behind the information highway and wants to associate the company very tightly with that growth — and educate them at the same time.

"The information highway is probably the hottest topic in the market today, yet people have no idea what it is," he says. "The Internet has become an instant thing with a million people joining every month. But 400,000 falling off the other side because it is too hard to use."

Camp says the IBM information highway will have "no charge" available in major metropolitan centers worldwide. "And we will spend tens of millions of dollars in the first 90 days publicizing this. It's not by accident in People magazine. Five magazine on billboards in major media (all major magazines) and even consumer titles like PC Computing reveal, in stock ad, the way to get people to get on the information highway via the IBM information superhighway." We will make it OS/2's superpower with the information superhighway."

At press time, IBM was also negotiating with several manufacturers (Microsoft) to provide a coupon to go into the OS/2 Warp V3 box that would allow OS/2 users to purchase a 5.6-Ft 128-F high-speed modem for less than \$100 to enhance all of the above. IBM's OS/2 Warp V3 users will be able to use the IBM's network and support their Day One to communicate in their high speed. They have done the hard work to make the Internet more accessible to end users," says Camp.

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DTP versus WP

DTP versus WP

BY GEOFF WHEELWRIGHT

And, according to this view of the world, you need to be willing to spend time honing layout-publishing skills including layout of columns, along with printers, use of fonts, color, white space, and the like, including the size of the printed characters, the type style and typeface, so be you are publisher or other words, you have to be a connoisseur in different typesets, ornamental ornaments and printed or printed publications.

This vision of computer-based layout and design work, however, fails to take into account the real range of features built into today's word-processors that bypass the need for more traditional layout and publishing skills.

Ami Pro 3.1.1

One of the first to build such features into a Windows-based word-processing package was Lotus Development's first Pro (available either as its own or as part of Lotus SmartSuite's Creative Assistant) and Pro 3.1.1, this product was a layout package that is much closer to QuarkXPress than all other DTP word-processors such as WordPerfect or Word-Perfect for DOS.

To enter with Ami Pro often was to take into account some things such as creation of multiple columns and handling text around graphics. In addition, technical drawing tools are included directly in Ami Pro that can focus curves, lines, circles, boxes and provide fill with patterns or one of its million colors. You can also create text or drawings to any drawing tool Ami Pro.

In order to insert these drawings — or charts, tables, equations or scanned images — in a document, you must first create a "frame." Having one of these frames, you can then rotate and position it. When you're done with what you want, you can then insert wherever you like in the frame.

You can insert text in the frame to create a headline or "text block." There's also a scientific and equations editor that displays all equations in WYSIWYG style (including a full range of mathematical symbols, constants, units) on the "text" window. Language tools, says the Ami Pro equations editor can be used to "convert virtually any scientific or mathematical equation."

Equations are not the only things you can insert in frames. Tables — compiling a reading from complex databases to the normal range of a spreadsheet — can also be inserted in a frame. If, for example, you insert part of a Lotus spreadsheet, you can still move around it as if it was still a spreadsheet. You can even use the add functions to read up columns from the spreadsheet after they have been inserted as a table.

In addition to its ability to handle newspaper-style columns and the insertion of almost any form of text or graphics in its own, Ami Pro also includes a variety of on-screen images in its built-in, 100-virtual clip art library.

And if you don't like the images it offers, a user-comparable set of import facilities is provided — allowing you to insert GIF, CGA, PCX, BMP, EPS, WMF (Windows Metafile) and other types of images. If the

imported image is a TIFF file, you can also pay around with it in Ami Pro itself, adjusting contrast, brightness or the thickness of edges within the image itself.

The frames into which you insert these images can also be experienced in a wide variety of ways. Using options on the frame pull-down menu, you can add background colors and colors to borders and provide the frame itself with rounded corners or various drop shadows.

And, regarding something which has always been an annoyance in Windows word-processors, you can actually adjust graphic images on-screen, within your document — cropping, rotating or enlarging them as necessary.

Finally, you can even do some things in Ami Pro that PageMaker's not allowed related to the world economy, such as rotate text or graphics in single-degree increments. The simplification to drawing publishing packages doesn't mean, however, that Ami Pro provides a number of document views, including a draft mode for basic text editing and a layout mode that allows you to see what page exactly as it will printed and work on it at the same time.

Until Ami Pro came along, most Windows WP systems only allowed you a preview mode to see what the page would look like when printed.

The real innovation here is that you can actually control editing and layout work on the document to see in two-page view. In the equivalent of PageMaker's Fit to Window option, until Ami Pro came along, most Windows WP systems only allowed you a preview mode to see what the page would look like when printed, but you would not be able to make any changes to the page while previewing it.

That being said, if you had used Pro 3.1 in the above without wanting to display either the draft mode — perhaps due to memory or on other PC — Lotus does provide several performance options to minimize this problem.

The default setting of the system, for example, is that when you place graphics onto a page, they will automatically be displayed inside the frame in which you have placed them. If you have placed a multiple graphic or are viewing Ami Pro on a slower PC or laptop, you may want to set preferences so that the graphic is not displayed while you're not editing your work.

With the release and flexibility of Ami Pro's layout facilities, it is no wonder that anyone with a need for DTP-style layout in a word-processing package might be the last candidate to use the package.

The last issue facing anyone who might

want to use Ami Pro in this way is a large installation is that they often will need to produce large documents or reports. The business of producing tables of contents, chapter headings and page numbering can be a pain. This is particularly true when different people author different parts of the report.

In most word-processing applications, you would have to collect all the documents from different users into a single file in order to carry out indexing, creation of tables of contents and page numbering. And Pro, however, has a master document feature which eliminates the need for this.

Changes of a book, for example, can be kept in separate files and the master document function will manage the set. It even has the tool that says that if you insert a new graphic or chart in your text and there is a list of illustrations or your table of contents that will automatically be updated as you carry out the insertion.

Word Pro Windows 4.0

Intensely, Word for Windows 4.0, most likely, layouts with newspaper-style multiple columns and means to work with tables to change and insert. It understands text in personal letters and Word.

Starting a new document with multiple columns is now simply a matter of clicking on the columns button on the standard toolbar. Once you click on this button, you'll find the mouse to the right to select the number of columns you want to be used in the document. Highlighting three columns, for example, will immediately create a three-column document.

It may well be, however, that you don't want columns of uniform widths that you would prefer a layout with, for example, two wide columns and one thin column. If that's the case, a better option is to simply switch to page layout view and then drag the column markers on your ruler until the column widths are what you want them to be. In the meantime, all the rules to make sure that the columns are the dimensions that you want them to be.

If you want to be more precise, select the Columns command from the Format menu and enter manually the widths and spacing details in the Width and Spacing section at the bottom left-hand of the box. Then allow you to be highly-specific about the widths of your columns.

There are a few tricks to working with multiple-column documents in Word for Windows 4.0. The first is to remember that in the first few multiple-column layouts all the text is "connected." This means that if you add more text to the first column, all the text in the second and third columns will automatically be moved down the page to accommodate the change.

Secondly, if you want to have text that will stay in one place no matter what happens to the rest of the multiple-column layout, it makes sense to use Ami Pro's style names, names as "frames" that contain text or graphics and the tabulation contained



It used to be that if you wanted to flow text around graphics, or have a headline at the top of a page in a different typeface, or include photos in a document, or rotate text — and then see exactly what that document would look like on-screen before it was printed — you had to have a DTP system.

There was simply no other way of doing the job. But anyone who makes a living by selling desktop publishing systems is in for a challenging time over the next couple of years. DTP software publishers are finding themselves squeezed at the two ends by the word-processed word processors with many layout and graphics-handling features (such as Microsoft Word for Windows 4.0, WordPerfect for Windows 4.0 and Ami Pro for Windows 3.1) and at the high-end by electronic publishing systems (such as Aldus and Interleaf) that encompass "desktoppublishing."

These days, a good Windows word-processing package is a good — if not better — at handling the day-to-day document production requirements of most users. It is only a small, few who now really require the kind of precise and elaborate control that something like PageMaker, QuarkXPress or Corel Ventura offers.

But there are many word-processing packages suggest the same people looking DTP for years ago who are still waiting WYSIWYG (What You See Is What You Get) output. Their one of the reasons why the Windows environment only on the DTP. Now that everyone using a PC has WYSIWYG available to them through Windows, the marketplace is changing drastically. In the old and location of the high-end DTP applications is increasingly becoming that of a niche market.

DTP providers, meanwhile, have often taken the view that the DTP package and word-processors will never meet — that the fundamental architecture and paradigm used by them is so different the those who really want DTP will never be swayed to word-processors.

But there, DTP is still the system you purchase for your company to manage desktop publishing and print equipment. It is the producing documents ranging from a neighborhood newspaper up to a professionally laid-out magazine or even an entire book.

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Desktop Publishing

DTP Software: The Right Tool, But for What?



What's desktop publishing? That's easy, putting text and graphics on a page, right?

A decade ago this basic definition pointed to a limitation in what personal computer software could do. Now, any old word processor will allow you to do basic pictures, diagrams and charts in your documents. If you already use DTP software, you know what benefits it offers. However, if you are wondering whether you should trade in your trendy word processor and enter the "real" world of desktop publishing, here are a few guidelines to help you make an informed decision.

Text Streams

As the number of sources of text increases, the main issue is to accomplish the layout task with DTP software. If you compare a word processing file in a DTP file, you'll see a fundamental difference: The word processing file is a single text stream, whereas the DTP file contains several text streams. When you lay out The Computer Page, for example, each article is a separate text stream.

The difference becomes significant when you want to make changes to a document layout. Suppose you have been using your word processor to produce the company newsletter. You've created the main newsletter file by merging the publisher's monthly message with the results of the annual charity fund drive departmental reports, personnel changes, etc. into your word processor. Then you applied a hierarchy of adjustments, such as text size, line size, tab settings, columns for the body copy, and borders around headlines or photos.

So far, so good. Then the boss comes in and says he wants to add two paragraphs to the publisher's message. You add the text and then realize that the extra text has displaced the headlines on the next story. Not a problem, you can make adjustments that suppose you have everything but the publisher's message, and you don't know how long it's going to be, even though you know it has to take up page 2. Or maybe you are dealing with two vice presidents and the controller who all want last-minute changes. You'll eventually reach a point with a word processor where whenever after your last word so readily that your entire layout is no longer workable.

In a DTP package, you can lay down the words in one order, and because the publisher's message is in a different file than the controller's report, changes to one won't automatically alter the layout of the other. Of course, you'll still have to deal with the

problem of a late message and last-minute changes to the advertisement, but hey, isn't that why you love your job?

The suitability of a DTP package over a word processor has to do with the layout

of your documents and more to do with its complexity. If you have a long report with multiple chapter headings and subheadings, for example, a word processor will work admirably in some cases.

Text Placement

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printer/printer you might be able to accomplish a similar task, but a DTP package is much better at placing text blocks precisely.

Type Control

Most word processors allow you to specify type size in points (just as you would in a DTP program). In point sizes approximately 1/32 of an inch. However, word processors will often let the interface speed conversion from the top of the typewriter — single spacing, double spacing, etc. DTP software sets the spacing, indentation — and justification — from beginning. This allows you precise control over the amount of space between lines, as well as between words to between individual characters.

Setting type in an effective and easily available format is an art in itself, and if you want to treat your text as a design element, a DTP program is the only way to go.

Publication Format

Word processors are geared for printing out documents in letter-type formats, letter or legal size pages, envelopes, labels, etc. DTP programs will handle larger types of paper — WordPerfect will allow a paper size of up to 27 by 37 inches, compared to WordPerfect's maximum size of 44 by 42 inches, for example — but unless you have an extra wide printer or a plotters, you may find it difficult to print a document with those dimensions. Designers often send their large page DTP files to a service bureau which can output larger page sizes. If you send a file created in your word processor to a service bureau, you may find them unable or unwilling to deal with it.

Color

The ability to deal with color is one of the key features that distinguishes high end DTP programs from word processors. "Dinking" with color usually means preparing a file to take a printer or service bureau run (other color specialists from which color printing plates are made to print each color. The lat-

est workdays of high-end DTP programs like QuarkXpress or PageMaker include better color handling and are far more capable of dealing with color than a word processor.

Which DTP Tool?

At the high end, two packages rule the DTP scene — QuarkXpress, now in version 3.3 and PageMaker 5.0. These are available in both Windows and Macintosh versions and both packages claim that the file formats or interchangeability between Windows and Macintosh. These have advantages only when changes aren't being viewed in our August 1994 issue.

PageMaker owns a program for Unix users, now has Windows and Macintosh versions that all share a common file format. The "Three Faces of PageMaker 4" in April '94 DTP. In any case, the two also included a Windows version of its installation DTP software.

However, unless you plan to design sophisticated layouts, and most of your files to be an engineering, technical business, or design outline table or books, a low-end desktop publishing package will meet most of your needs. A number of entry level DTP packages provide most of the functions of the big ones, but at less than one-quarter the cost. Among these are Aldus' Home Publisher for the Macintosh, Microsoft's Microsoft Publisher for Windows, and the Page Line End Desktop Publishing for the PC. One advantage of these entry level packages is beginning desktop publishing in the business of professional design. Most Publishers include all software templates, which left Publisher has Page Elements, Paragraphs, &



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Photoshop Power-PC Accelerator

Adobe has released version 1.0.1 of the PowerPC Accelerator plug-in for Adobe Photoshop 3.5.1. The plug-in replaces the native Photoshop image processing plug-in with native PowerPC code. Using this plug-in, Photoshop users with Power Macintosh computers should realize speed gains of 1.5 to 2 times over a Quartz computer (the necessary hardware). The update is available for users on the network, but falling outside DTP available, secured by typing "DTP" in any dialog box.

The update also includes a Power Macintosh version of DirectColor, a Photoshop plug-in that enables low end Macintosh color space colors, such as the brown, to make them appear to be when moving over middle gray areas when the monitor is set to other resolutions or millions of colors. The "DirectColor 2.5.1 PPC" plug-in has been installed between the "DirectColor" plug-in and Power Macintosh computers — (JCB)

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TrueSpace for Windows

BY EEL TRICHARDER

Product: TrueSpace 1.02
Price: Callal Computer
 8888 Langdon Drive, Mountain View
 CA 94035 Phone 415-953-8888
Price: \$25.00 (US)

There is still to be a mixture of excitement and uncertainty as that floating above TrueSpace. In low price and collection of Windows make me wonder whether it would live up to the reputation of Callal Corp. the producers of well known Amiga software. But there is finally a low real animation package available for the PC, a good, but the question is how well a low end package can give within high end software?

After some time with the software, I have been quite impressed with what it can do. Certainly it cannot provide the power of high end animation, but what it does provide is quite surprising, considering its low cost and its platform.

Installation is simply a matter of typing in the serial number, although, the user may use the manual key to find the number for the installation instructions, which I never found. They could simply leave it out, I had no problems installing and setting up the program.

The first thing I notice is that the screen is reminiscent of high end 3D software — you are presented with a 3D grid base upon which the model building takes place. As you build your model you rotate scene, so you the model will find it is writing on the face

of the point of view of your eye, from the point of view of the side of the grid, or from the point of view of the model.

This is quite interesting compared to many other PC based software packages where you often have to work with three or four different windows displaying top, front and side views. When you store the grid/object you are in viewing an real time, instead of a 3D view as with other software.

The command menu can be placed where you want, there usually they are placed below the top of your screen, and they're been grouped in logical ways. Many of them are selected with a left button mouse click and lead to further subcommands or adjustable variables with a right button mouse click. Added view flip, bottom, left, etc.) can be selected with extra windows which can be placed anywhere on the screen and easily accessed.

Modeling is where the software really shines out. TrueSpace has one of the best object hierarchical systems I've worked with. This gives you a start with a primitive object, and then left key, highlight one of its items and right button, click, or mouse it with the mouse, you can move/rotate as you wish. This extends to the distance you want, it's fun and surprisingly easy.

Organic shapes, one of the more difficult things for computers to produce, become relatively easy to create. Any one of the items or objects can be subdivided with the click of the mouse button, so in many ways

Windows as you want, allowing the further extension of individual faces.

A deformation lattice also subdivide can be placed up to include the model. TrueSpace has grid lines or points on this lattice for deformations with a scale adjustable position of the model. The use of this sort of modeling is really what the power of the package. Creating dimensionally accurate models in a 3D environment. It can be done, but the flexibility is less for Windows creative of organic objects, where economy is not much of a concern.

Other tools provide basic such as create arrays of objects and the creation of beveled objects. The basic for doing good looking mapping, animation, and lighting are provided with the same relatively quick and easy use, and extending to them with a good viewer. Mapping textures and rendering pictures are easily done although including not faster than most other renderers I've used.

The program also includes Boolean capabilities, but they operate only at 2D level. You build in 3D and extrude into 2D.

A few features that interest me included to give you. TrueSpace model at least a 34.3 megabyte per animation work, and in my "3D space optimized." My knowledge is still in this 3D reality. It is still possible, but the usual degradation of images happens and I find some difficulty making the little scene and seeing the grid lines, although the object (being worked on) was easy to see, so I

assume it is twice based on the image based.

Callal has a 3DS which I worked in download some patches. More models I'd like (many patches have been found).

There's one manual (and a map to read), a few tutorials to get you started and then a reference in all commands. Lots of screenshots help to make it very readable, as it always the case when you work with technical manuals and tutorials on your own. There may be times when you get a bit stuck in something else it would not, as clearly as the book reader can't explain it.

This is not unique to Callal's software. It is simply a lack of learning resources on your own. I say this because most of you will be looking at it yourself in this way, and it might be helpful if you have had some experience in learning from manuals. But I find it will really go.

Now the import and export files (TrueSpace, dxf, and a couple of other 3D formats, and it accepts many formats for images. They only provide you with a few formats maps, though, so you would definitely need access to other public programs as files.

TrueSpace has a fairly good learning curve, and, as already said, has a great support. It is more than all the features and then some of high end animation software, but for someone interested in having some 3D fun, it's a good start.

Contact: Billie Simpson, Callal (415) 953-8888

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Creating Worlds with VistaPro

BY GRAEME BENNETT



From: Virtual Reality Laboratories
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As much as we like *3D* before mentioned elsewhere this tower is worth up being the 3-D landscape rendering program, we'll like to see what VistaPro can do by being the program we actually create things with. And, whether you're creating 3-D networks for business or pleasure, there is much to be said for this.

Why do we use VistaPro? Well, for the *3D* before mentioned elsewhere this tower is worth up being the 3-D landscape rendering program, we'll like to see what VistaPro can do by being the program we actually create things with. And, whether you're creating 3-D networks for business or pleasure, there is much to be said for this.

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LASER PRINTERS

Laser Printers in Review

BY GRAEME BENNETT



Like "plate paper laserprinting," "resolution setting," "resolution to print resolution," "resolution compatibility," and "resolution of communication," don't expect too often their translation.

LED vs Laser — not all page printers actually use a laser. The DALLANT 400, for example, isn't a laser printer at all; it's just the marketing shorthand for LED, but actually uses light emitting diodes and thus is correct by name on LED printers. We know of several owners of low-cost LED printers that are very happy with their choice.

Resolution enhancement — your computer screen's screen displays graphics at a resolution somewhere between 32 and 640 pixels. On the screen it's really not that high. In 300 dpi, an inkjet or laserjet laser printer typically prints at 300 dpi or so, better laser printers offer higher resolution — up to 600 dpi. But several manufacturers have developed ways of emulating the laser beam to create dots that are smaller than could be created by the dot size that create a paper on lower resolution printers. A 300-dpi printer

with RET or resolution enhancement technology (short for a term for the process) can output pages of substantially higher pixel quality than their unenhanced brethren.

Higher resolution printers sometimes use "resolution boost" to achieve the best print quality. Each laser is not of plastic component that is melted and bonded to the page by the laser itself is composed of smaller particles than standard ones, and thus produces less-detailed resolution output.

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See how easy it is to use

Laser printers have changed a lot in the last few years. A few years ago a 300-dpi laserjet laser printer with limited graphics resolution was the norm. Inexpensive laser printers for specific programs had to be installed, taking up huge amounts of desk space unless you were content with Courier output or a few other dot-matrix options.

To get higher resolution, you needed an expensive laserjet laser printer with a lot of features and many other features and many other features.

Today, a variety of printer manufacturers offer printers providing high-resolution text, enhanced graphics, variable fonts, and a number of other fancy marketing buzzwords.

Windowscape [Scanning]

File Edit Font Help

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Case History Summary

DATA FILE SYSTEMS

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Planes with a "true 400 dip" joint engine have a mechanism that can advance the trim in smaller steps than a 400 dip joint engine that uses larger steps of constant deflection. Instead, it uses 400 dip engine with resolution enhancement in some cases.

Enhanced gray tuxedo — As you probably know, laser printers can't print a true gray — they only simulate shades of gray by assembling patterns of black and white dots. That's known as a halftone.

As well as standard line printers that print without a screen, the new models have features that permit only one line of text to be made in boldface, italics, underline, or all caps. Some models permit the printer to lay down a group of dots that creates a large dot, and some have assemblies that can dot the printer's output line. For the traditional desktop printer, which you might get in a newspaper, photo shop, or library, you may want to consider a 300-dpi printer. A 300-dpi printer is going to print fine lines to work with. If the dots are larger, the image is going to show. An unenhanced 300-dpi printer such as the original Apple LaserWriter can only manage 30 lines per inch of these complex images. If it is enhanced, then, you're looking at 60 lines per inch. There are two to different hardware dot stages. There are 300 dots per inch, as Hewlett-Packard's LaserJet 4000, for example, has 300 dpi, and 600 dpi.

Needles (or, say, ice cream) that come with glass or plastic graphics — especially current photographs — almost always with enhanced accuracy.

Indolefin fonts — back in the bad old days, fonts were created on your computer's hard disk as in the printer's memory as bitmaps. In other words, each size of a given size "font" was one big file with pre-rendering. It wasn't good for desktop publishing or graphical environments such as Windows or the Mac, where documents could be revised with ease of any size. Adobe popularized the concept of variable fonts in its Postscript language built into the first LaserWriter back in 1985.

Today, there are several indolefin font technologies. Windows and the Mac directly support variable Type1 fonts but the concept is not as popular there. Postscript is still around and Windows in later versions can embed variable fonts in documents or on any printer using a program from Adobe called Adobe Type Manager. ATM, by the way, is

Forbes' Richland's printer control language (referred to as PCL) has its own variable font support. There are several other systems as well, including Speedy, Compugraphics, SpeediFont, and FontFlow 2.0.

Thin-page imaging—We, as third-party thin-page imagers, are not involved with scanning your lights-out snapshots or the data they contain. We are only involved on the market, providing those snapshots to you. We are not involved in any data management, processing, or analysis. Any data management, processing, or analysis is done by you. We are not involved in any data management, processing, or analysis. Any data management, processing, or analysis is done by you.

Translation warning — some patterns can cause the type of data being sent to it are specific to the appropriate language to output the data correctly. This feature can cause trouble if it doesn't work reliably. If translation warning is important to you, test it thoroughly before leaving.

Automatic port switching — some printers can have more than one computer connected to its ports simultaneously and receive data from any port without manual intervention. Even more than the constant sending tone listed above, we've seen ample evidence that this format always works the way it should — especially on some older designs. By having

distributed and open models of use — although Apple Information and Learning have been the leaders since 1984, the concept of two-way communication between the computer and printer is something of a new one for most PC users. Winston Richard and Michael Johnson of the University of Illinois at Urbana-Champaign performed the research a year and a half ago when the Windows Printing System, which gives a LaserJet series 3 in control the ability to tell Windows its print status (e.g., "The print is out of paper," etc.) was not even on the Windows Printing System in speech. These printer messages, although we find that most users usually turn the feature off after about two weeks,

their own proprietary "Explosive" to provide feedback from the patient, while several other companies, including Lexmark and Minolta, are pushing for the Minolta's A Series standard, ball pens, such as Pentel and Paper

[illegible][illegible]

What to Look For in a Remanufactured Toner Cartridge

If you choose to buy a remanufactured toner cartridge for your laser printer, you'll save about 30 percent on the cost of a new one. However, not all remanufactured toner cartridges are of equal quality.

The following information was provided to us by Laser World Printer Services Inc. of Richmond, BC — LWP.

In 1990 the Canadian Council Standards Board (CCSB) developed a voluntary Cartridge Listing Program for the major makers of Laser Printer Cartridges. This program has helped to ensure that the standards for the minimum performance levels for such cartridges in print quality and density, smudging, adhesion, packaging, handling and warranty.

Cartridge specifications are also displayed as follows:

CLASS 1 — Services and listing of the availability of the cartridge, disposal of the

remaining toner, recycling, cleaning and adjustment of all components, including the optical photocopier roll (OPC drum), repair where necessary, replenishing the supply of toner, etc. immediately and testing of the remanufactured cartridge.

CLASS 2 — Services listed in Class 1 plus replacement of the OPC drum with a new standard drum in line of refurbishing the original drum.

What to look for

The CCSB Certification Mark is a buyer's assurance that the Remanufactured Laser Printer Cartridge has been constructed, tested and listed to meet the same performance requirements of the CLASS 200-10, 100-4000 and the quality assurance requirements of the Program.

Today in Canada 97 percent of laser printer users recycle their toner cartridges, the percentage for 1994 is 93 percent. ☐

Laser Printers in Review

Continued from page 14

not their own proprietary system to ensure high-quality results.

Although we don't think it's particularly important which system you choose, we heavily recommend a printer with such an extensive suite. Given the choice, though, we'd prefer the system that directly supports all the operating systems you plan to use. Check with your dealer as the vendor is responsible for determining which drivers the printer you choose are available for your platform before buying. If you don't have the right driver, you may not be able to access all the features of your printer.

Windows 3.0 — Laser printers, such as Lexmark's WinWriter 440 performed in the top 10 most in NEC's WinWriter 440 are Windows-oriented printers. They make the jump in language of Microsoft's Windows to create the images. Thus, such printers cannot be used from DOS or on other computers, such as Macintoshes or Amigas. There are both advantages and disadvantages to these "Win-Writers" printers. Because the computer is handling the underlying printing on other words, the page image is constructed in the computer's memory. (Many of the Windows graphics handling routines are then

sent as a single bit-map to the printer.) Because the printer is essentially "dumb," such units are typically low-priced. The print speed naturally depends on the speed of the CPU handling the formatting, but, provided, a 6501 processor or very fast 486, it doesn't tend to become an efficiency rate. The "Win-Writers" printer makes it possible the Windows back is for the Win.

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For office users, series 4 users need to share a single printer, the old Plus is best. ☐

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new data types within the program, including mathematics, logical, long integer, timestamp, binary coded decimal, new and many data.

One of the most important new features in Paradox 5.0 for Windows is how powerful it is able to connect to other databases and provide query facilities. Paradox can communicate both local SQL databases and those running on a network server.

A valuable upgrade tip is Open Database Connectivity (ODBC) support, which can give users access to information available on more than 30 other major database programs including dBase, Ingres and many others. The Workgroup Linking lets users share information with other workgroup members directly via a LAN, or via a mod phone.

There is also extensive support for programmers. The ObjectPAM, language (level) object development lets programmers easily edit and debug programs without using Paradox's native language. One into two. Methods and Properties have been added to ObjectPAM, to provide greater power and flexibility to developers. For people who want to build and compile their own programs around the Paradox engine, Borland promises that a native version of the Paradox engine will be available shortly, perhaps by the time you read this.

Borland's new Paradox 5 for Windows is an impressive database program. Fully utilizing the Windows environment to make the program easy to use, and it does not compromise when it comes to the power of its tools. It is a fully object based, cross-platform database that will prove to be a strong competitor to the Windows database market. The estimated street price for Paradox 5.0 for Windows is \$350 and it is available as an upgrade for a approximately \$180.

dBase 5.0 for Windows



Borland's original dBase for DOS is the standard by which all subsequent database products were developed. Today there are estimated to be seven million users worldwide that rely on the dBase standard. Despite the fact that competitors have made major inroads in the database market with their new Windows-based applications, there is still a huge base of users who continue to use dBase. Its and IV for DOS, Borland has finally released dBase 5.0 for Windows. It has taken over 4 years for Borland to produce but for many users it is well worth the wait.

In an effort to lure even the most die-hard dBase fan for DOS users to the Windows version, Borland has made the transition from DOS to Windows as easy as possible. Borland guarantees that any applications written in other dBase file or IV for DOS will be able to run seamlessly on dBase for Windows. While the resulting programs look

in an effort to lure even the most die-hard dBase for DOS users to the Windows version, Borland has made the transition from DOS to Windows as easy as possible.

very DOS-like, dBase 5.0 automatically adds Windows functionality, including mouse support for the program.

A lot of effort has gone into making the learning curve for current dBase programmers as small as possible. Programmers can use all of the commands they are already familiar with to write the new programs for dBase 5.0 for Windows. For visual design, dBase automatically translates everything you do into programming statements. Using so-called "two-way" code, you can write code in a Command-line window and automati-

cally see the results of your code in another. It's never been easier to program an end-user database application than with dBase 5.0 for Windows.

One of the most significant advances for DOS-based dBase programmers is its object-oriented design. Once users have created components designed for use applications, they can easily change its properties for use in another application. It also has Open Play and Play Architecture, which allows programmers to instantly access virtual

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Project Planning Made Easy

BY COLIN MACGREGOR STEVENS

A brief introduction to project planning and a review of the latest versions of Microsoft Project and Symantec's Time Line.

People don't plan in Gantt, they fall by the wayside.

Planning is bringing the future into the present so that you can do something about it now.

— Alan Watts in *Flow or Get Control of Your Time and Your Life*

very desirable.

The traditional methods of project planning have included a variety of charts, often using 8 1/2x11 inch sheets of paper laid out on a table or stuck to a wall. Customer relationship managers were required to document the critical path, and the project completed the date. Any changes in "status" or "cost" sometimes meant a lot of reworking.

A simple example sometimes used for project planning training is the construction of a wheelbarrow. First, you must have suitable plans and materials. Then the assembly must be laid out in size, painted and assembled. By laying out the various tasks, you can see that some tasks must be done before other tasks can begin (e.g., you can not paint before you cut the lumber). If the build of the wheelbarrow takes a day to do, however, perhaps you can plan to spend that day assembling the wheel and axle.

For a simple project like a wheelbarrow this process is easy to do, and on a piece of paper, complete with arrows and notes. As more items are added, the changes

When project planning has traditionally been very difficult to write, large machine-readable projects that have hundreds or even thousands of tasks, each with their own dates on which to do the work, the dates it is to start and end, and the budget available

A few years ago I purchased a 1989 project management computer program but the hopes that it would help me to plan projects for myself and my co-workers failed. I presented the results to my superior, he took one look at the huge program that contained almost six feet by six feet, and tossed it to the back room.

The program could "do the job" but the lack of flexibility, the difficulty in understanding it, and the lack of a satisfactory summary/generation format were major barriers. The potential was there, but the real-world wasn't writing.

Project planning involves laying out the tasks required to complete a project, putting them into a logical sequence and then looking for ways to avoid bottlenecks and make the process more efficient. The bottom line, even now, is to see that the project is completed successfully, on time, and within budget. Meeting several deadlines or completing a project and your staff — is to do

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them up with features such as cash flow and available project resources so that full cost and efficient projects can be made.

Taken in a project can have instant feedback. You as the planner need to know the details, but too require or simply for closer viewing, you may want to be able to hide these sub-tasks. This is very important when you must hide a particular item. The new Windows look and flexibility mean that you can now present a complete professional summary report, an abstract and print selected reports. This may be of a certain time period or week to be performed by a certain team member. You can enter milestones with a two-day duration.

An example of a milestone would be a key date, such as the ending of the phase of a project. Microsoft project planning systems often had errors caused during multiple uses. Using a computerized project planning program can greatly reduce the risk of errors occurring. A project calendar can also be adjusted to reflect your hours, days of work, vacation, etc. The Gantt Chart automatically incorporates this calendar information.

Project planning programs offer a variety of views of projects, including the Gantt Chart, Network or PERT chart, Calendar, Cross tab View, Resource Allocation, and a host of icons and special views. Viewers also use different views of the resources.

Advanced work with these programs can include Dynamic Data Exchange (DDE), Object Linking and Embedding (OLE), embedded data, merge, importing and exporting, e-mail and importing. Dynamic data also in Time Line View Open Database Connectivity (ODBC).

General areas for improvement on both programs include making these tools even

easier for busy managers to know and to use, putting them on CD ROM as an option, and the inclusion in the program's menu to add price in \$200 or less so that this valuable tool can become common on home and small business computers.

In reviewing these two programs, Microsoft Project V 4.0 emerged as the clear choice due to its ease of use.

Microsoft Project

Version 4 for Windows

From Microsoft Canada
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Microsoft lives up to its reputation for friendly software with this excellent project planning program. I was immediately

impressed with the helpful screen. The tutorial, called "Quick Preview", was the plus side of an excellent as its simple project, in which there are "What's New" and "Get Going" to help guide the user through the project is also very clear (designed in Microsoft's new Look Microsoft Project 4.0 Windows on the Macintosh).

You can save the project file with a "Save As" version. This allows you to make changes and yet be able to compare versions with the original plan. It is easy to add new to-top stage of a plan. There are labels with a color for the although a small symbol when you click the person. Reports are easy to alter by printing the same report in a previous version to compare your or generating a report. You can also filter a report.

New features in Version 4.0 include the Cost Center and Planning Wizard as building site, new entry for tasks including day and step recording tasks and features for complete planned projects to actual projects. There are also new report formats, day viewing features, multi-project consolidation, electronic mail support, improved network support, and DDE support. Customization and automation of repeated operations are also possible.

A colleague who upgraded from Version 3.0 reports that the program was very easy to learn. In Microsoft Project V 4.0 was easily used by Version 4.0 and the improvements such as the Wizard and for improved features of the same were very welcome.

The Input Checker is a new feature that when a word is printed in a report, the background text does not move to show it in its context. Unlike Microsoft's new Look Microsoft Project's editing is automatically

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1. **Identify the problem.** The first step in the problem-solving process is to identify the problem. This involves recognizing the symptoms of the problem and determining the underlying cause.

2. **Analyze the problem.** Once the problem has been identified, the next step is to analyze it. This involves breaking the problem down into its component parts and determining the relationships between them.

3. **Generate solutions.** The third step in the problem-solving process is to generate solutions. This involves brainstorming a variety of possible solutions and evaluating them based on their feasibility and effectiveness.

4. **Implement the solution.** Once a solution has been selected, the next step is to implement it. This involves putting the solution into action and monitoring its progress.

5. **Evaluate the results.** The final step in the problem-solving process is to evaluate the results. This involves assessing the effectiveness of the solution and determining whether it has successfully resolved the problem.

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CG BOARD
 Meetings on Tuesday, October 28
 10:00 a.m. to 12:00 p.m.
 Board Room, 1st Floor
 10000 Wilshire Blvd., Suite 1000
 Los Angeles, CA 90024

1. **General Information**
 2. **Project Description**
 3. **Objectives**
 4. **Methodology**
 5. **Results**
 6. **Conclusion**
 7. **References**
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Variable	Mean	Standard Deviation	Minimum	Maximum
Age	31.25	5.12	20	45
Gender	0.50	0.50	0	1
Marital Status	0.35	0.48	0	1
Education	12.50	1.50	10	15
Income	15000	5000	10000	25000
Health	0.75	0.43	0	1
Smoking	0.20	0.40	0	1
Exercise	0.10	0.30	0	1
Stress	0.60	0.49	0	1
Depression	0.15	0.37	0	1
Life Satisfaction	0.40	0.50	0	1

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 Composite 1/4" (1)
 S-Video 1/4" (1) 4:3P AUTO
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<http://www.corel.com>

Corel Flow: A Serious Drawing Tool for Serious People

BY BOB MACDONALD

Tested: CorelFlow — Compatible with
 with images in 20/40/64
 Input: Corel Corporation
 Price: \$199 US

CorelFlow promises a lot on the box, 2,000 symbols, 1,000 clip art images, 1,000 Corel Photos on CD-ROM and 100 TrueType fonts. All for only

\$199 US. However, the box also promises "Quick and Powerful Diagrams" while delivering anything but. Since the product was specifically creat-



ed to meet business people's complex flow charts, network diagrams and organizational charts, I expected to be able to choose from a number of templates for each application and then simply custom-ize the format to suit my needs.

Instead, when Corel Flow presents its vast arsenal of icons and symbols that would likely be extremely useful for such projects, and that's in "Your Icons" pane from the 100-point manual that the program ships with, too — you have to actually create your own flow chart, not work diagrams on organized level charts by hand, and then you get to define the wonderful world of icons and symbols to make it look right.

Ironically, since that's what Corel Flow really is, a variation on the old basic paint program, but with a much bigger paint box to play with, arrows and pointers show up, accounting symbols quickly add up, architecture and interior design symbols are easy to find with, business logic icons are readily included and there's a host of language tools to choose from, too.

A complete list of Corel Flow's symbol library is quite a long list, too long to list here, but you might also be struck by their inclusion of several human bodies of various ages and genders along with a variety of clothing, hair parts and hair cuts to choose from — just in case you want to approximate a specific person or even build a somewhat realistic family tree.

Money, vegetables and fruits are here, too, and in obliquely related fashion Corel has certainly thrown in hundreds of marginal cartoon portraits of business spouses (Janes, Tinkles, Blandina Jones (Diane), Elvira), politicians (Roosevelt, 40th, Norrington, John Smith (Bill), Agassiz and others) and work stars (Wilfred Smith and John Smith).

This ought to tell you that, in the end, Corel Flow can be useful as well as fun. The day diagrams you really design to, you don't need it to ensure you, to artists, quick and particularly powerful.

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<p>Canon 3290</p> <p>4.5" x 6.5" Photo Printer</p> <p>329⁹⁹</p>	<p>Canon Stylus 400</p> <p>4.5" x 6.5" Photo Printer</p> <p>299⁹⁹</p>	<p>STEALS 486-66MHz</p> <p>Local Bus</p> <p>33"</p> <p>999⁹⁹</p>	<p>Canon 334000</p> <p>4.5" x 6.5" Photo Printer</p> <p>789⁹⁹</p>
<p>For Medium</p> <p>48"</p> <p>115"</p> <p>34"</p>	<p>Media 83</p> <p>4.5" x 6.5" Photo Printer</p> <p>348⁹⁹</p>	<p>STEALS 486DX2-66MHz</p> <p>Local Bus</p> <p>45"</p> <p>1349⁹⁹</p>	<p>Canon 334000</p> <p>4.5" x 6.5" Photo Printer</p> <p>789⁹⁹</p>
<p>Local Printer 486 12</p> <p>4.5" x 6.5" Photo Printer</p> <p>389⁹⁹</p>	<p>Web 386</p> <p>4.5" x 6.5" Photo Printer</p> <p>38"</p> <p>49"</p>	<p>STEALS MULTIMEDIA 486-66MHz</p> <p>Local Bus</p> <p>55"</p> <p>1649⁹⁹</p>	<p>IBM Aptiva MPL 310</p> <p>4.5" x 6.5" Photo Printer</p> <p>12"</p> <p>2199⁹⁹</p>
<p>HP 100 Series</p> <p>4.5" x 6.5" Photo Printer</p> <p>649⁹⁹</p>	<p>HP 100 Series</p> <p>4.5" x 6.5" Photo Printer</p> <p>449⁹⁹</p>		
<p>HP 100 Series</p> <p>4.5" x 6.5" Photo Printer</p> <p>289⁹⁹</p>	<p>Canon LP400 Laser</p> <p>4.5" x 6.5" Photo Printer</p> <p>599⁹⁹</p>		

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need to make sure your PC already has a sound board (such as Sound Blaster or Microsoft Sound System) and the sound software installed.

Catching unwanted

When we first unpacked this video capture board, we were immediately impressed with the high quality of production. The circuit board was very clean, lacking the clutter of jumpers, switches and wires and low-voltage "peaches" that are not uncommon on some older add-on boards from smaller manufacturers.

Because the board is jumpstart, you configure it entirely in software, allowing you to clearly watch the board and get your PC back together immediately without having to wait until the jumpers, memory addresses, IRQ conflicts and other problems are sorted out.

Having said that, configuring the MiniVHS-DX1 re board was not exactly a snap. To start with, our own system was supposed to include an "optional" program on the board installation disk, which came with it. The install program (which is supposed to run from Microsoft Windows) was not clear. Instead, we had to simply install the .EXE file as a new device under Windows for Windows 3.11 and sort things out from there.

This process worked reasonably well, except for the fact that the area of memory needed for the video memory range required by the MiniVHS-DX1 was already in use by a network interface card. We had to disable the network card, and include some "memory exclude" instructions in the part of the config.sys file that defines MEMMAK, as well as add a DOS=EMM386 line to the config.sys file.

If we had the time and inclination, we probably could have fiddled around and found a memory address that would have suited both network card and video capture board. However, we worried that this process may take you a bit of time. Roll on the day when Plug & Play is installed in all new PCs and cards.

With the hardware side of things configured properly, it was time to get started with the software. There are four applications included with MiniVHS-DX1: the first being Adobe's Premiere (Windows edition) and the others (three being part of Videobuddy) are Inboard Video Capture, Video Editor and Video Plus.

We started out work with the Videobuddy software by using the Video Capture application. The video we were capturing was from a home movie from a standard Sony Hi8mm camera. It was connected to the MiniVHS-DX1 board via a standard RCA cable—a cable which did not, incidentally come with the system. The company might be reconsidering making the single time a part of the package, as it was annoying to have to scramble around to find an RCA cable to link up the video board and camera.

In the US, the company has just started selling a commercial MiniVHS-DX1 re board bundle for US\$1499 US, which doesn't sound like a bad deal when you consider the US\$599 street price of the video board by itself in Canada. And at this price, we would bet that an RCA cable is included with the system.

Up and Running

Once we linked up the camera to the video board and started running the video



capture software in Videobuddy we were pleasantly surprised. We pressed the "play" key on the controller and Videobuddy immediately began displaying the images from the recorder on the computer's display in full color (although at a default speed of 18 frames per second).

This "preview" function allows you to set your video before capturing any portion of it to your hard disk and gives you a better

view than you get by looking through the black and white viewfinder on the camera. The MiniVHS-DX1 re board offers a maximum of 16.7 million colors using MPEG (MPEG compression) and provides two-dimensional viewing of images including MPEG (the feature Picture Expert Comp handles for compression). The board also includes 31 new integrated digital video modes. You'll get a maximum display resolution of 1024 x 1280 from the MiniVHS-DX1 re although how close you get to this

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maximum will depend on your video card and display) and a maximum color depth of 24 bit. You also do NOT need a human computer (such as PC or V.I. Bot) to install the MiniVIDEO to your PC.

All of this results in being able to get better than TV quality, images from the MiniVIDEO board although you may not want to pay the storage price for this high a quality. The reason for this is simply to see what you can do with this.

A 10 second clip of full motion video captured at 30 frames per second hogged

slightly more than 10MB of hard disk space per minute; output that equaled that which you get on TV. Taking the frame rate down to 11 frames per second reduces the amount of hard disk space consumed by more than 50 per cent, but the motion does begin to look a little jerky on doing so.

It is a trade-off the quality of the Video Capture software however that chooses such as frame rate is very easy to make. It is an excellent way to save space, that provides you with less of choice and flexibility as not only how you capture your images but also the type of

video you can capture.

A number of video types including I-frames and PBAS broadcast type signals are supported, an are various compression video signal formats (including the all-important PAL SECAM and NTSC standards for later) is particularly important for those who may wish to have their video work captured and downloaded seamlessly.

By capturing video into digital PC video files, you completely eliminate the need to worry about whether things are recorded to PAL, SECAM and NTSC. The images from all

these different broadcast standards are converted to simple Motion JPEG. VVI files that can be played on any PC with a MicroVIDEO board or hard.

If you wish to play your captured video on anything that doesn't have the MicroVIDEO board in it, be prepared to use the bundled Adobe Premiere to export it to another format. While the default AVI files will play happily with the Microsoft Windows 3.11 Media Player while the ability is installed in your PC, they have the ability to be decoded only the hardware is not longer in your machine.

The video editing software in Videobits also conveniently offers you the opportunity to do lots of basic video editing on your PC, from slightly splicing together short video clips, to adding overlays, to carrying out transitions between video clips. The software provides for 20 different transition effects (including dissolve, box wipe, random block, wipe and others).

However, however that the splicing can take up considerable time, particularly in systems that do not have access to memory as that suffer with slow hard disks, from an hour into 10 hours with one system with 200 MB hard disk, reducing it 10 seconds from a 10 second video clip took the system several minutes.

That 10-second clip was also fairly fast to get to hard disk space, requiring a bit of a wait to be stored. Keep in mind, however that this was once again a 30 frames per second clip. If you lower the frame rate, you can adjust the amount of space consumed.

The other point to make here is just how much compression has actually gone on to achieve this result. To give you an idea of this, we tried using PROX to compress the AVI file containing the 10 second video clip. The file size was inflated up with only two per cent, causing decompression time slightly slower than loading (VVI compression actual). It is this is even more impressive when you consider that the VVI files produced by the Videobits software are being decoded, stored and played "in and out" and show no degradation in performance as a result.

One of the reasons for this is that in addition to using Motion JPEG compression/compression, the Videobits also software also supports all major Video-In Windows "video" such as Cinepak, Indeo 3 and MJ-Video 1.

The final point to make about the Videobits software is that you are not tied to editing video with it. Using the bundled Photo Shop application you can also carry out image editing of video "frames" or other image files or indeed TrueColor Macintosh graphics application like Photoshop supported, including BMP, GIF, PCX, EPS and PFD.

In there it is also in order in the Videobits also software bundled with this innovative board, to do nothing of the power of the Adobe Premiere software, already well established in this end of the market. The whole package is a great way to get started with video editing on your PC. It is still a bit on the expensive side, but should provide you with quality results and enough flexible editing tools to yield the final product that you want. If you have 10,000 or so to spare, look how to work with video that has to be high on your "to do" list. □

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music at business meetings and music shows as long as you do not make or claim to be made in excess of 100 copies of any song. That's good enough for me. Of course you can't sell the songs or bundle them with your own software. They are intended to be used as part of your multimedia presentations.

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If there is a luxury yacht class recording studio in a power boat, and Multitouch is a ship. Music Library is just that, a library, and it would be a shame about any of the above mentioned remarks. So for the many years, but there are also presented with Multitouch's Sound Impression.



Sound Impression

Sound Impression is a different kettle of fish. It manages not only MIDI files but also wave (WAV) files and audio compact discs. It is MIDI song players, a CD song player and a waveform editor.

Sound Impression has the look and feel of contemporary stereo equipment. Four computer cards are stacked on your screen, each offering a wide selection of features. Select some of the graphics can be changing, let it start with a new graphic.

The CD player is the bottom component in Sound Impression's stack. Provided your system has a mean computer CD-ROM drive, you can play those CDs, program play lists, and save the lists to disk. There are skip, scan, stop and next buttons, and with the status panel you can set volume and balance. With an excellent to a technical discussion of the quality response, suffer it to my late Michael sounds just fine on my computer's CD.

MP3 files are also easily managed with Sound Impression. Using the MP3 component, you can load up to 48 files or more as well as create and save play lists. Volume balance skip scan stop and next buttons are present. While Sound Impression does play MIDI files, it does not edit or record them. It is not a sequencer.

Sound Impression, does however record and edit wave files. At this, it excels. It will record waveforms such as voice or music from a microphone, or from CD to tape tape input. Using a microphone plugged into my Sound Master, I recorded my voice as a wave file. Technically everything went well but an amount of editing could reduce my vocal output, although creating the waveform did make it.

On a late night run, I recorded a live on-air of the microphone sounds used in the old radio hit "Rendezvous with the Stars" and sound Impression is sophisticated features to play with the recorder.

My music career seemed appeared on the scene with all the peak and valley sounds

of what waveforms. That I selected a portion of the sample by clicking and dragging over a small area of the waveform, applying a noise filter, changed up associated gaps and time. I added a little echo, experimented with channel range, fade, crossfade, gain, and just modified the sample size and was satisfied. Some more to go and with a little work, produced a decent sound effect that could be introduced into a sophisticated word processor or any CD application.

The only screen I have shown the more editor components is that the last time

that appear during an editing session has a cryptic graphics. It is impossible to delete their functions. But, by pointing to a feature and clicking the right mouse button, a new screen appears showing the feature's function and including package. A handy status bar for CD-ROM and MIDI files. It also monitors the selected wave files with gain and rate. Like most of Multitouch's software, I found Sound Impression easy to install, use, and understand with thoughtful on-line help screens.

If you're interested in Multitouch's software, just send me a box, that with a copy of Multitouch's Sound Impression. It's a CD-ROM sampler that lets you view drive loaded versions of all the software available along with some other programs called The World of Music Sampler. It is a great way to get your feet wet. ☐

About the Author: Dave Havel, writer and editor in the last month since, has left the area of the Atlanta-Highway. By day, he works for Southern Illinois College. By night, a writer, with music, and computer.

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V.WHAT? A Guide to Knowing Modems

BY JAMES MACPARLANE



James MacParlane

When it comes to using modems, computer jargon means as the word. Shopping for a modem can be confusing: no matter which box you pick up, it's full of words that sound like they should make you want to simply get the unit back on the shelf and go into under your desk.

But things are really not as complex as they seem. All of the jargon on modem boxes falls into the following categories:

Transmission standards — What language the modem knows and at what speeds it can talk.
Serial connection standards — What types it can use.

Data compression standards — What types it can use.

Advanced features — What other goodies are thrown in like call ID.

Here's what you might see on a typical box: **14,400 bps** — This is the maximum speed at which the modem can operate. The "bps" part means bits per second. BPS should not be confused with baud rate. They have completely different meanings.

For Modems — There's an difference between the hardware found in a "fax" modem and a "PC" modem: Is it external or is it internal? The only difference is the included software (see "Includes Modem" below) and available I/O options.

External — If you're using a fax you need to get an external modem. PCs can have the choice of internal or external. I highly suggest getting the \$50-\$100 ones and getting the most out of the following reasons:

- It is affordable; you can't beat it.
- It has lots of pretty blinking lights that are helpful in troubleshooting.
- You can actually test the modem's speaker.
- This one is sure to spend two hours trying to configure ISP switches (in an attempt to prevent it from having Internet problems with your owner and other great guys if you don't know what this means. There aren't another modems trying an external one).
- This one is sure to stand around behind you

while in 14,400 bps with phone calls.

• You can't impress your friends with what this one can do.

V.32bis — This is the transmission standard the modem supports. This means it can talk the V.32 language at a speed of 14,400 bps per second (bps). When you use V.32 without the "bis" that means the modem talks the same language but only at a maximum of 9,600 bps. If you use V.32bis, that means the modem can talk at a speed of 14,400 bps.

As a rule, any two modems speaking the same language can talk to each other, but only at the speed of the slower of the two modems. So if you have a 38.4 K V.32 modem that also supports V.32bis and you connect it with only V.32bis, you're restricted to 14,400 bps, even if the maximum speed of the other modem is 38,400.

Other languages include HST, which is used primarily by older USB modems for modems, V.42, which is a new high speed protocol supporting speeds of up to 28,800 bps, and V.42bis, which is used mainly by newer modems in USB applications.

There is currently some confusion about the differences between the V.42 (V.42bis) and V.42bis (V.42bis) modems. The V.42bis (V.42bis) modems are typically a typical example of technology being a mixed bag. Some of the standards committees can't agree, and, in this case, the names seem to be standing on V.42, so both in terms of V.42bis (V.42bis) will be and when it will be approved. It is currently not really ambiguous.

In general, the faster the better (and more expensive). Buying anything faster than 14,400 is a waste of money right now.

Throughput of up to 27,000 — This is how fast the modem can talk. The "throughput" speed takes data compression into consideration (see V.42bis).

V.42, V.42bis and MNP-2 — These refer to different types of data compression and error correction.

V.42 is an error correction protocol. This is built into the modem and it works by sending checksum information along with each byte of data to prevent the other modem from

the other modem gets the data and the checksum. If mathematics says it matches what the data has been a data transmission error. If an error has occurred it automatically sends the corrupted packet. These errors are typically caused by telephone line noise.

V.42bis and MNP-2 are data compression techniques. Before each packet of data is transmitted, the modem's software examines the data and determines whether it can compress the data. Text files, databases and spreadsheets are highly compressible, allowing a two to three times speed increase on average. Ignore the claims about 8:1 compression. The only time you get that sort of data is when you're sending some completely flat data like the name "T."

Files that are already compressed (ZIP, ZIP-CR, ZIP-ARC, etc.) gain no benefit from the modem's data compression. These types of data compression are usually much better than the type listed in the modem's firmware. You can tell better of compressing your data with ZIP or ZIP-CR than to depend on the modem to do the work.

Group III, Class 2 fax — This paper deal with fax modems that include fax capabilities can communicate with any regular serial-line modem. Group III refers to the transmission standard supported (all fax modems support group III fax).

Class 2 refers to the method used by your computer to connect to the modem. Class 2 is more "intelligent" than class 1, but class 1 is more flexible. Class 1 allows you to use a standard modem on the line (any line modem, which allows you to literally dial a ring line protocol). This is important in case of the faster fax software like Delta or Windows Fax & Classmate (I don't class 2 when buying).

V.32, V.32bis, V.32, V.32, V.32, V.32, V.32 — These are transmission standards for direct modems. 1200 1200 1200 etc. Usually they're not as fast as many other data protocols.

DSR-based — Modem designs range from basic "DSR" digital signal processing, and "Microcontroller" DSP modems are sophisticated digital/signal processing technology that is used on the same type of chips found in central processors. They can usually do some pretty big things. (See sidebar.)

Some DSP modems include auto modem technology. This allows you to negotiate the features of the modem by changing the modem's on-board software. While this can save you money in the long run, modems are usually only behind the times when it comes to actually providing these updates. The DSP modems come out in March of this year, but you'd be hard pressed to find any DSP modem manufacturers that don't come out with update ROMs or software.

Microcontroller-based modems, such as the popular WinModem chip set, have a dedicated modem-on-chip. They're cheaper and usually have better "give-and-take" features. They're great for upgrading.

Includes V.42bis — When using a high-speed modem, you'll find that it is very important to have a V.42bis chip on internal modems, or a V.42bis chip on your external (or if you're an external modem). The reason is that

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If you're a fan of TV buff as I am, and if you're the kind of person that keeps Leonard Maltin's *Movies & Video Guide* handy for your TV set, here I got a Web site for you! Tap out the following addresses on your Internet and get to know Cardiff's Movie Database.

The main site is:

- <http://www.ion.ualb.ca/MovieDatabasequery.htm>
- The URL "MovieDatabase" refers to a
- <http://www.movies.ualb.ca/Movie/>

Plus, there are mirrors in Australia and Finland with Cardiff, an honour to M.D.B. As you travel to this site, you will be greeted by three buttons that allow you to search films by name, title and character name. The beauty of CMDB which is a lot more powerful than Maltin, is that you set the parameters and it does the work for you.

The Mirror Database's FAQ (see description CMDB) is an informational resource often consulted via the Usenet Messagegroup rec.movies.mdb. The FAQ states that "The

objective of the database is to provide useful and up to date movie information. I only available online, some on many systems and platforms as possible. It currently owns over 12,000 movies with over 200,000 filmography entries and is expanding continuously.

The database includes filmographies for actors, actresses, writers, composers, cinematographers, editors, production designers, costume designers and producers; plot line; leading character names; movie ratings; year of release; running times; movie length; genres; poets; soundtrack; personal trivia and instantly desired information.

Several thousand movies are covered completely from the movies series in the mirror list players. In the ASCII form, this data is available currently through about 1000 of mirrors.

The access details are available via FTP sites and by E-mail requests. The FAQ reveals 32 instantly links covered by the database and about 11 instructions to look after the site.

CMDB is available not just as a WWW interface but via other more powerful protocols. The most frequently requested searches via the mirror main server and the Usenet movie database are: information on a particular movie; a particular person's filmography; all movies associated with a particular

movie; movies associated with a person; director's movies associated at a particular person; movies starting by a particular person; persons who have played a particular character on the WWW site only; films when people were hospitalized; and on a more limited basis, how featured actors via poster address.

What's else fun about CMDB is that users are able to view and watch their favorite movies. Results show up after the film is called up.

The many Web sites are still under construction or under an "in progress" mode, but CMDB has had the benefit of having at least five years to its Internet life in building its archive. Many sites that I would say CMDB is way ahead of a lot of other interesting sites just due to the sheer size it has available at your fingertips.

Recently a friend and I visited the database. We there at 11 at many projects and we as actresses we could think of "hoping to stop it." Quite frequently it was able to give us information on almost good deal of some of our favorite TV shows, pleasantly surprising us.

When it failed to answer our queries, we just sat there like in wonder and wonder as well as to whatever became of it.

If you search for the name of actors or actresses, you will be given a list of all known

films a television roles that they have done. Web pages offer my point and clicking, so if you mouse on a cast credit, you will be given the film title, year produced and all the other known credits associated with that film.

As comprehensive as the database sounds, we found many gaps in the information presented. The bulk of the known information is on actors, actresses, writers, and directors, with the rest of the production crew relatively unknown. The complete an area of the site has included instructions on how to request documents that explain how to have additional movies produced.

For example, we discovered an extraordinary Robert Collier credited as a composer. This is wrong. We knew that the real name of the composer was Robert Cohen. Typo error in data base software. But as users continue to use the database, errors such as this should be identified and corrected.

So far, I searched for a movie titled "Robert" (1992), a feature-film starring Robert Redford. I gave me a list of all the actors who appeared in the film and their roles in alphabetical order. Six movie reviews were also available to download. The missing results revealed were added this film as it is out of 25.

Continued on page 81



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MAIN REVIEW

Reader Rabbit Does Windows

BY PEDRO ARRAIS

*The more things change,
the more they remain
the same.*

Title: Reader Rabbit 1 for Windows
Price: The Learning Company 1625 State St.
Fremont, California 94536
For: Ages 3-6
System Requirements: Windows 3.1, VGA Display
285 or better, 480/640 Screen and
and mouse
Suggested Retail: \$29.95



Born in the market for computer software does not mean sell and old games are easily replaced.

With this in mind, The Learning Company recently re-introduced what has been a very successful title for them: Reader Rabbit 1. This program has been touted as the "World's top selling reading program" for ages 3-6. With this in mind, however, the company has made the program run under the increasingly popular Windows environment with little or no help for parents to guide their children's progress.

The program comprises four modules: The Match-Up Game, Word Trivia, Labeler and Sorter. Match-Up matches pictures to words and is quite simple, with computer cards that have to be moved over to match them up. Except for the variety of pictures, it did not seem to capture my child's interest.

The Word Trivia was more difficult, with sequencing questions repetitively. Parental guidance is recommended to help the child understand the object of the exercise.

The Labeler does just that: spelling words in the various objects that appear on the screen. The word recognizer for this module was clumsy, requiring a set sequence to put the respective word in place.

The Sorter presented word recognition of letters and spelling patterns in a fun and learning way.

Overall, this program looks dated, with token sound support and dated graphics that seemed much too staid. Although it is a decent device, the program amounts

with little to no handle for parents. The program does not offer progressively more difficult exercises like some of the competition, and the "forward" and "backward" controls are inadequate.

While this program does not offer state-of-the-art graphics nor sound, the teaching component is dependable — and for if you are looking for a starter program for your pre-schooler, this book again classic may be right for you. □

Source: The Learning Company, 800-768-0101

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[illegible]

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Myst Comes to the PC

It is not so much a cause as a phenomenon.

RESEARCH DESIGN



Title	MyS
Windows 95	First Round
Windows 95/NT/Windows 2000/Windows XP	Second Round

Originally released for the Macintosh last year, *Legend* has recently been ordered for the PC, and is talking the same excellent reviews.

Much like *Vampire Game's* JIN Crow, *Underneath's* Myer is a total letting-gone character for the type of sentimental we can expect to see when the huge storage capacity of CD-ROMs is utilized fully. It's a nice lot of love.

Using your cursor to click on an image of a book, you are suddenly transported to the island of Mya. There is a brief minute of instructions given for the game and it is up to the player to decide exactly how they will approach the duties of Mya Island.

You can go for a tour of the island (the game is consequently mouse-driven), viewing the series of stunning photorealistic scenes that the game makes have produced and interacting with the various floating objects, switches, and doors. The game play is deceptively simple, but you won't discover

that there is a purpose to your wandering, as you drive further into the world you are presented with you learn more about the place you have driven into.

This post is sketchy at best, and all you really know for sure is that something has gone very, very wrong. The pictures you find in this are hideously wrong in the majority of the plant you have to suspect. And, like many good mystery novels, there are a few red herrings thrown in as well.

[illegible]

While many of the puzzles are truly to figure out, the game has been well designed to maintain the four-year-old level of user. Most solutions come about by the virtue of merely making a connection, and that fourth element only opens the option to explore further. Most clues to figure are guaranteed a few answers that will last late into the night.

Despite all of this, *Idiot* will not appeal to everybody. People more accustomed to fast action-packed games will probably find the game a bit dull in comparison. If you like a good mystery, chances are this game is for you. The game's ending is a shambolic play for *Idiot II*, but until something else even remotely similar comes along, *Idiot* is a fairly solid computer game. **C**

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<p>Compass Pentium 90 \$3,080</p> <p>INTEL CPU & MAINBOARD Celer 333MHz 2MB</p> <p>Monitor: 15" 100% CRT Modem: 14.4Kbps, PCI Adapter Keyboard: 104/106 Keys Mouse: 3-Button, 2-Button, 1-Button 400 PCI 5V/3.3V Card 20MB</p> <p>Mini-Tower, 2 Station, Mouse 801 Enhanced Keyboard Display: 10" 20 24 30 36 42 1-800-456-7890 2 Yr Parts & Labor Warranty</p>	<p>Compass Pentium 60 \$2,630</p> <p>INTEL CPU & MAINBOARD Celer 333MHz 2MB</p> <p>Monitor: 15" 100% CRT Modem: 14.4Kbps, PCI Adapter Keyboard: 104/106 Keys Mouse: 3-Button, 2-Button, 1-Button 400 PCI 5V/3.3V Card 20MB</p> <p>Mini-Tower, 2 Station, Mouse 801 Enhanced Keyboard Display: 10" 20 24 30 36 42 1-800-456-7890 2 Yr Parts & Labor Warranty</p>	<p>Compass 486DX2-66 \$1,390</p> <p>INTEL CPU Celer 333MHz 2MB</p> <p>Monitor: 15" 100% CRT Modem: 14.4Kbps, PCI Adapter Keyboard: 104/106 Keys Mouse: 3-Button, 2-Button, 1-Button 400 PCI 5V/3.3V Card 20MB</p> <p>Mini-Tower, 2 Station, Mouse 801 Enhanced Keyboard Display: 10" 20 24 30 36 42 1-800-456-7890 2 Yr Parts & Labor Warranty</p>	<p>Packard Bell Canon EVEREX DAYTEK HEWLETT PACKARD</p> <p>COMPASS Computer by East Power and Heat MARKHAM 10000 Old Court, Suite 100 Markham, ON L3R 0Y6 905-947-8888</p> <p>NORTH YORK 4000 Yonge St 7th Floor, Suite 700 905-491-1111</p> <p>Call for other systems !! We provide sales, service, training and support to major corporations.</p>
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20 Years Ago

The State Of CAD In 1994

BY RALPH SHAWORSKI

It used to be said that you need to be a rocket scientist, or near-equivalent, to use CAD (computer-aided design). CAD's interface was user-hostile, the hardware demands were outrageous; the price was out of sight.

There's been changing over the last 10 years, primarily due to the influence of AutoCAD becoming the Number 1 selling CAD package by selling 80 percent of the licenses for 3D prices at the price. But in the last two years, AutoCAD itself has come under attack from competitors using the same marketing ploys and from non-CAD drawing programs.

The truth is that CAD doesn't matter any more for most of today's computer users. The more so that CAD software now serves more for the general computer user, even if it is sometimes mistakenly assumed that way.

Who needs CAD when drawing software like the likes of CorelDraw, Microsoft Design, and Adobe Illustrator provides all the precision drawing that users need — with CAD-like features to boot? Instead, CAD is an important tool (some would say the most important) tool for a niche in the work place: architecture, engineering, and food mapping, building construction, and facilities management.

CAD differs from drawing software in a number of important areas. CAD is essentially more accurate than drawing software, often up to 14 decimal places. That's

0.000000000000001, or a ten trillionth of any unit of measurement you care to use, whether inches, millimeters, light years, or sunspot's stains.

CAD does not place limits on the size of the design; you can draw the entire solar system full size to an accuracy of a centimeter.

CAD does not place limits on the size of the design; you can draw the entire solar system full size to an accuracy of a centimeter. Mathematically, AutoCAD and Cadfree can handle a range of numbers from 1E-308 to 1E+308 in CAD; you don't draw with a scale factor you always draw full size, then select the scale where it comes time to print the drawing or simply let CAD do the drawing in the place.

Although most low-cost CAD packages don't go-dimensional drawings, it's CAD's 3D abilities that place it head and shoulders

into complex projects. Solid modeling is the most impressive thing it lets you do: create borders of intersections, the mass of objects, and their centers of gravity. Once you have the drawing in 3D, most CAD packages make it a trivial matter to punch CPU-consuming to obtain a photorealistic rendering and an animated walk through. Most 3D CAD is the stepping stone to mechanical CAD and related topics.

100% Compatibility
With only 1,000,000 copies forward sold while the dominance of AutoCAD in sales (though not in features) has made it the Number 1 package among competitors. The first marketing campaign by competitors was to point their CAD packages as far lower than AutoCAD. Some packages can now present the price of AutoCAD.

Then, two years ago, Bentley Systems (also began a new wave) started by digging in the teeth of price. But even with the promise of AutoCAD compatibility, 450 and the predecessors of the Number 2 CAD software, InterCAD, 3D begins by sending lightly but they haven't a legal battle have launched. But does it is AutoCAD policy in quadruple against the competition, 80 and others because better in the last 12 months.

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AutoCAD LT (left) and its sister CAD (center) for Windows is almost 100 percent compatible with AutoCAD Release 12 at 127% the price (it is seriously fixed by its lack of a programming interface).

above drawing software. Interestingly enough, the drawing packages are beginning to touch each other. 3D, for example, Microsoft's dropped all 3D capabilities from the latest release of Program.

With CAD you have the choice of working with realistic models, surface models or solid models — creating 3D models by sweeping in existing profiles, and using boolean operations to merge simple objects

Most CAD packages (and most physical software) can read AutoCAD's DXF files. The drawback to DXF is that you need to first create a DXF file from an AutoCAD drawing. This is a necessity that can be difficult if you copy of AutoCAD is hard to perform the sophisticated rendering. Also, DXF files tend to be four times larger than the original AutoCAD drawing file, quickly filling the

Learning

Windows Keyboard Shortcuts

圖 4 正負電荷電荷量平衡圖

Keyboard shortcuts are often a much faster way to moving around Windows than hitting your fingers hard on the keyboard, moving the mouse to the right position, clicking or dragging the sticks up, or even on buttons, and then

abstract: This is the first longitudinal test of the process model of social anxiety.

11/11/2011 11:11:11 AM

[illegible]

using a file. In virtually all Windows applications, you can use yourself the trouble of picking up the mouse if you just leave the following keyboard sequence: ALT + then N. This means holding down the ALT key on

the informant, providing the letter P in being up the file system and then the letter S in indicating that some work is now in the file.

Another thing: universal keyboard shortcuts in MS-P and then P. That means again: select the file menu and then the printing option. Because it is part of the post file menu structure, it does not vary from application to application, and you can count on using this key combination in whatever Windows software you happen to be using.

The same goes for said of many ALT key combinations to get certain key Windows commands running. Including ALT+B to go the help menu is obvious and ALT+H is for bring the Help items in attention. To see which ALT key combinations work best in your favorite application, just look at where the command is defined in the ALT menu name. The file menu name for example features an underbar underwith the letter f. This means that holding down the ALT key and pressing the letter f will bring up that menu.

Thema: „Kommunikation“

The next great keyboard shortcut to know is **CTRL+ESC**. This involves holding down the **Control** key, then hitting the **ESC** key, and then letting go of both. Doing so will bring up the Windows Task List showing you a list of the applications and tasks that Windows is running. From this task list, you can quickly search to any of the running applications on the list by scrolling to it and pressing **Enter** on **Alt + F** (or **Alt + Enter**).

The Task List window gives you a number of other options, including the ability to "hide" all your application windows, so that you can start working diagonally across the screen, one behind the other. Another option is to fix the windows, so that they stay put instead of an approximately random place on the screen depending on how many applications you have open at any one time. The menu applications are open, the window size of the fixed windowed. A third window option on the Task List is to Arrange Icons, which is useful when you're applications have been minimized as icons and are buried all over the screen. The option will neatly arrange them at the bottom of the screen.

Other than Cancel (which just ends the Task List command) the only other option is End Task. This is particularly useful when you're running a DOS application. In a nutshell on the Windows desktop and is useful by using the Task List's End Task command, you can safely close down the offending DOS application without messing the whole of your Windows environment.

[illegible]

If you want a simpler way to move between applications, just press ALT+ESC and the window you first saw in application to the screen. But the Task list and ALT+TAB are not the only proposed shortcuts for moving between applications. By holding down the ALT key, quickly pressing the TAB key, and then quickly releasing both, you can quickly

[illegible]

Rec

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Systems upgrade: XT, 286, 386->386, 486. Memory and Hard drives upgrade.
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Commemoratives

[illegible]

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what's new

SOFTWARE/CONTENT COLLECTIONS ON CD-ROM

Earlier this year, the illustrious collection of the Smithsonian-Library II content element from the side of the planet Jupiter. While many



people needed the entire entire, those who had Internet access had the option of downloading the content straight to their computers. These also-coming titles will get an early of those who want images to stay away from the CD-ROM.

The CD-ROM collection map of the best images of the entire collection from other countries from around the world including some spectacular shots from NASA's Hubble Space Telescope. Hundreds of still images are accompanied by technical information



Multiple Screen Technology with Real-Parity Colors II

on the screen. There are also 3D animation files, along with viewing utilities supplied for CGO, D3D and Macintosh platforms. Altogether there are more than 40MB of files on this CD-ROM covering the scientific collection. The suggested list price for the \$19.95-\$29.95 is \$19.95. — K.S.

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HOW THE PACKAGES & COLOR

LAURENCE ARRIVES - Monitor

Reduced in killing its first color line "the world's most affordable color laser printer."

The HP Color LaserJet will not get you back \$100, and for that you get a network-ready printer that will print black and white or full color on letter size plain paper or transparency stock at 300 dpi. It will also print on 7.5 x 11 paper — but only on black and white.

HP says the printer's main job will be to "bring color into the one-way business environment." One of the company's goals was to avoid the story, based on color look that you get with thermal-type color printers while avoiding the costs and size that occur with inkjet printers when they get wet. Judging from the color samples provided by HP, the company has achieved "this look" in color on the screen, which is the job that we're going to have with its more color laser printer.

The printer incorporates what HP calls ColorSmart technology, which senses the type of color required (e.g., photograph or text) and adjusts the output accordingly.

HP is claiming that the Color LaserJet will be very economical to operate in full-time mode. It estimates that cost per page will not be more than 3.3 cents for black and white or 12 cents for the typical page with text and color graphics. Up to a maximum of only 10 cents per page at full-color 100 pages worth of a letter size page.

HP has also introduced two new LaserJet printers: The 4V and 4MP support PCL and Postscript versions of the same printers. The 400 x 600 dpi printer will handle paper up to 11 x 17 inches, and are also the first HP printers to incorporate a built-in fax device, which is optional. HP representatives emphasized that the 400 includes genuine Adobe Postscript Level 2, not just Postscript emulation.



HP Color LaserJet

HP Color LaserJet

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The LaserJet 4V has a suggested price of \$2,475, while the 4MP — which comes with an HP DirectLink network interface card — sells for \$2,995. — BT

Contact: Hewlett-Packard (Canada) Ltd.
800-368-4275

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what's new



PACKARD BELL LASERNET ULTRA TITANIUM 486 • Packard Bell Canada has introduced a "designer's" vision of its latest, and 486-powered PCs including multimedia ready models. The PCN includes detachable color screen panels — 4 mb, 8 mb and 16 mb are available so far — that allow people to switch the computer to their home-office desire. The PCN also has color coding on the monitor, keyboard, printer and other connections to fully make make sure the colors are plugged into the correct slots.

The multi-media system has 100% 2 compliant and includes a double speed CD-ROM drive and 16-bit local MasterCard parallel sound cards. The system are built into the monitor housing.

Included with the package are 27 multi-media software including CD-ROM discs. The system are available with prices ranging from a \$3,495 (486) to a \$5,995 (486) system. Prices start at \$3,995 — 137

Contact: Packard Bell Canada, 905-884-1100

GOALS FOR THE INFORMATION AGE

The University of Waterloo and Waterloo Institute Canada are sponsoring a symposium on "The Speech and Privacy in the Information Age" on November 26th. The one-day symposium will look at the way the information superhighway will affect our lives, especially to how it will affect business the way that small businesses like the

speech and privacy will be understood and protected — 133-8

Contact: Jeffrey Smith at (916) 485-4464 or via internet at jeff@pacbell.net or jeff@pacbell.net

COMPUTER ART WINNERS • Winners have been announced for the first contest designed to recognize independent art work created for the computer. The top for the New Yorker, New Yorker competition selected three \$2,000 U.S. Grand Prize with two runner-up prizes over 500 entries from around the world.

The winning entries were: *Blue-Chain*, *Flamingo* & *The Ocean of Time*, both submitted by Jay and George Leguay's An Animated Journey of the Cold War. The winning entries along with 21 other works that received special commendations were featured in a special program that opened the New York City Festival of the Electronic Generation September 30 1994. — 133-3

TECHNOLOGY SET AT THE FOREFRONT SCIENCE CENTER

Technology has opened new ways and means of expansion for cities, as they find ways of shaping this emerging industry to make their dreams come true. Not a finished state the Ontario Science Center is displaying technology or created by science from around the world in their Technology exhibit.

Learn: holograms, video computers and other devices are combined to convey vital ideas and environments that visitors can interact with. In *Myrtle TV* visitors ride a bicycle through a virtual environment created by Canadian artist Nancy Peterson. The ride will take up to a Cape Wilketon Centre, derived by American artist Gregory Remondini where small animals have to be running within a large sphere. Or you can visit *L.A. Auto*, created by French artist Lathénie Buis, which is as close to the experience of

an alien encounter as most people will ever get while the *Myrtle* takes visitors by the Canadian Museum White, designed by Japanese visitors to help it perform different tasks. There are also several training light and hologram displays that assist Japanese artists, and a video theater that serves images of virtual environments created by virtual reality artists. These technological installations like the *Myrtle*

between the art, the artist and the observer in the visit or becomes an integral part of the artwork.

TechnoArt runs from September 17-October 24, and again from November 15-January 8. The exhibition is free with major admission to the Science Centre located at 770 Don Mills Road in Don Mills. — 133-4



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and 82C environments. They all have full TCP/IP networking capacity and come with standard X Window Systems. Skills development from our directory available in many other UNIX systems, however? Yes! 1 page master UNIX (Linux) set

Without good documentation, dealing with a system is complex in UNIX, a bit tedious in the end. Along with the package we supply you with complete free in electronic. From our course to your computer, everything you may wish to do is in several. Questions like how to configure the best hardware, how to set up printers, how to keep up X windows, how to do networking and how to use C compiler are not all included. To get you started, we also include a 250 page Getting Started Guide and 100 pages User's Guide. Both guides give detailed instructions on UNIX commands, UNIX system administration, X windows, remote printing and many more. Standard UNIX release 4.1 and Release 4.2 are also taught. To help you get started a list of the best UNIX training is included. Finally over 400 pages documents are collected, a handbook and beyond, all the other materials you need to use at your first steps. To ease your preparation for installation, we have even supplied a non-interactive problem program for you to use a 2500 problems set two without missing any data.

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When you purchase FreeMail (about \$18 depending on the exchange rate) you become a *Parent FreeMail* site. The license allows you to create unlimited numbers of "Child" copies, which you may distribute to your friends, relatives, students, employees or colleagues. Each thoughtfully includes a sheet of preprinted FreeMail Child distributive labels which give your copies the history needed. There's a button on the FreeMail menu bar that allows you to create child copies with a single mouse click.

Once you start distributing your Child copies, your e-mail system begins its take shape. You can send files and e-mail messages to all or to selected children. A *Parent* spreadsheet told us he knows of one teacher that distributes copies of FreeMail Child to his students. He can thus pass components to all receive papers, and give others links to individual students.

We totally liked FreeMail and liked what we saw. We attached a list on our notebook which categorizes detailed list files. Parents when we read in the new FreeMail copies that their handwriting and then the file was automatically transferred.

One disadvantage is a system like FreeMail is that you must have to have the Parent copies — with FreeMail running.

— on 34 hours a day, or you have to make a schedule of when people can send and receive e-mail and when they can get at people's e-mail. It may be an idea to have FreeMail children for establishing a schedule doesn't pose like a major problem, however.

Contact: Serff Design 426-544-0447



FreeMail for Windows 3.11 is an elegant reimplementation of a simple idea. With FreeMail a version of Serff Design's Macintosh MT, you create your own personal bulletin board through which you send and

USER GROUPS

user group, or a community, is a group

of people who share a common interest

in a particular subject or activity.

They are often formed to discuss

and share information, ideas, and

resources related to the subject.

They may also provide a forum

for members to ask questions

and receive help from experienced

users. User groups can be found

online, in print, or in person.

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